

CLAIMS

1. A vehicle loader mechanism comprising:
 - a base mountable on a cargo deck of a vehicle;
 - a lift mechanism movable between a lowered position and a raised position;
 - a drive linkage coupled between the base and the lift mechanism and movable between an extended configuration and a retracted configuration for lateral movement of the lift mechanism;
 - a leveling linkage coupled between the base and the lift mechanism for movement with the drive linkage and to prevent tilting of the lift mechanism during movement of the drive linkage between the extended configuration and the retracted configuration; and
 - a cylinder coupled to the drive linkage for moving the drive linkage between the extended configuration and the retracted configuration.

2. A vehicle loader mechanism as claimed in claim 1 wherein the drive linkage includes a drive link pivotally coupled to the base and a drive arm pivotally coupled to the drive link and the lift mechanism.

3. A vehicle loader mechanism as claimed in claim 2 further including a frame pivotally coupled to the base and terminating in an end, and a rod journaled concurrently through the drive arm and the end of the frame.

4. A vehicle loader mechanism as claimed in claim 3 wherein the leveling linkage includes a leveling link pivotally coupled to the base, a stop link pivotally coupled to the leveling link and the rod, and a leveling arm pivotally coupled to the stop link and the lift mechanism.

5. A vehicle loader mechanism as claimed in claim 1 further including a second drive linkage is coupled between the base and the lift mechanism and movable between an extended configuration and a retracted configuration in parallel with the drive linkage, and a second leveling linkage is coupled between the base and the lift mechanism and movable between an extended configuration and a retracted configuration in parallel with the leveling linkage.

6. A vehicle loader mechanism as claimed in claim 5 further including a frame pivotally coupled to the base and terminating in a journalled rod extending concurrently through the frame and drive arms of the drive linkage and the second drive linkage, wherein the cylinder is coupled to the drive linkage by the frame.

7. A vehicle loader mechanism as claimed in claim 6 wherein the leveling linkage and the second leveling linkage are each coupled to the rod by a stop link.

8. A vehicle loader mechanism as claimed in claim 1 wherein the lift mechanism is enabled with the drive linkage in the retracted configuration and the extended configuration, and disabled with the drive linkage in between the extended configuration and the retracted configuration.

9. A vehicle loader mechanism as claimed in claim 8 wherein the lift mechanism is enabled and disabled by signals from limit switches mounted proximate the cylinder.

10. A vehicle loader mechanism as claimed in claim 1 wherein the base is reciprocally carried by tracks mountable on a vehicle.

11. A vehicle loader mechanism carried by a vehicle having a cargo deck, comprising:

a base mounted on a cargo deck of a vehicle;

a lift mechanism movable between a lowered position and a raised position;

a first drive linkage coupled between the base and the lift mechanism and movable between an extended configuration and a retracted configuration for lateral movement of the lift mechanism;

a second drive linkage coupled between the base and the lift mechanism and movable between an extended configuration and a retracted configuration in parallel with the first drive linkage;

a first leveling linkage coupled between the base and the lift mechanism for movement with the first drive linkage and to prevent tilting of the lift mechanism during movement of the first drive linkage between the extended configuration and the retracted configuration;

a second leveling linkage coupled between the base and the lift mechanism and movable between an extended configuration and a retracted configuration in parallel with the first leveling linkage;

a frame pivotally coupled to the base and terminating in a journalled rod extending concurrently through the frame and drive arms of the first drive linkage and the second drive linkage; and

a cylinder coupled between the base and the frame for moving the first drive linkage and the second drive linkage between the extended configuration and the retracted configuration.

12. A vehicle loader mechanism as claimed in claim 11 wherein the first leveling linkage and the second leveling linkage are each coupled to the rod by a stop link to maintain positioning thereof relative the first drive linkage and the second drive linkage, respectfully.

13. A vehicle loader mechanism as claimed in claim 11 wherein the lift mechanism is enabled with the first drive linkage and the second drive linkage in the retracted configuration and the extended configuration, and disabled with the first drive linkage and the second drive linkage in between the extended configuration and the retracted configuration.

14. A vehicle loader mechanism as claimed in claim 13 wherein the lift mechanism is enabled and disabled by signals from limit switches mounted proximate the cylinder.

15. A vehicle loader mechanism as claimed in claim 11 wherein the base is reciprocally carried by tracks mounted on the cargo deck of the vehicle.

16. A vehicle loader mechanism carried by a vehicle having a cargo deck, comprising:

a base mounted on a cargo deck of a vehicle;

a lift mechanism movable between a lowered position and a raised position;

a frame pivotally coupled to the base and terminating in an end;

a first drive linkage and a second drive linkage coupled in parallel between the base and the lift mechanism and movable between an extended configuration and a retracted configuration for lateral movement of the lift mechanism, each including a drive link pivotally coupled to the base and a drive arm pivotally coupled to the drive link and the lift mechanism;

a rod journaled concurrently through the drive arm of the first drive linkage, the end of the frame and the drive arm of the second drive linkage;

a first leveling linkage and a second leveling linkage coupled in parallel between the base and the

lift mechanism to prevent tilting of the lift mechanism during movement of the first drive linkage and the second drive link between the extended configuration and the retracted configuration, each including a leveling link pivotally coupled to the base, a stop link pivotally coupled to the leveling link and the rod, and a leveling arm pivotally coupled to the stop link and the lift mechanism; and

a cylinder coupled between the base and the frame for moving the first drive linkage and the second drive linkage between the extended configuration and the retracted configuration.

17. A vehicle loader mechanism as claimed in claim 16 wherein the lift mechanism is enabled with the first drive linkage and the second drive linkage in the retracted configuration and the extended configuration, and disabled with the first drive linkage and the second drive linkage in between the extended configuration and the retracted configuration.

18. A vehicle loader mechanism as claimed in claim 17 wherein the lift mechanism is enabled and disabled by signals from limit switches mounted proximate the cylinder.

19. A vehicle loader mechanism as claimed in claim 16 wherein the base is reciprocally carried by tracks mountable on a vehicle.